

Name _____ Period _____

Skill 9.01 Exercise 1	
(a) What is the mass in amu of 1 helium-4 atom?	What is the mass in g of 1 helium-4 atom?
(b) What is the mass in amu of 1 nitrogen-14 atom?	What is the mass in g of 1 nitrogen-14 atom?
(c) What is the mass in grams of 6.022×10^{23} helium-4 atoms?	
(d) What is the mass in grams of 6.022×10^{23} nitrogen-14 atoms?	

Skill 9.02 Exercise 1
(a) How many dozens of atoms are 24 hydrogen atoms?
(b) How many dozens of atoms are 2.44×10^{22} carbon atoms?
(c) How many moles of atoms are in 6.022×10^{23} hydrogen atoms?
(d) How many moles of atoms are 1.022×10^{24} carbon atoms?
(e) How many atoms of helium are in .50 moles?

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Skill 9.03 Exercise 1			
(a) What is the mass of 6.022×10^{23} atoms of the following:			
(i) helium	(ii) nitrogen	(iii) oxygen	(iv) boron
(b) What is the mass of 1 mole of the following:			
(i) sodium	(ii) magnesium	(iii) neon	(iv) calcium
How many moles is in each of the following:			
(i) 40. g argon	(ii) 6 g of carbon	(iii) 7 g of nitrogen	(iv) 32 g of oxygen
How many atoms is in each of the following			
(i) 14 g of nitrogen	(ii) 40. g of argon	(iii) 32 g of oxygen	(iv) 12 g of magnesium